THE YELLOW BOX, AND A LOST VEGETATION

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The Yellow Box, *Eucalyptus melliodora*, is not recorded in the F.N.C. Census, 1928, for the sandy country of the southern suburbs of Melbourne. There remains, however, a small timbered area at Highett, in which it is the chief tree, and search has revealed scattered examples over a considerable area. There is valuable information also, in old plans kindly shown to me at the Lands and Railway Departments. It may at once be mentioned that all the Yellow Box remaining is in places which were away from usual routes of botanical excursions even fifty years ago, being in a class of country which soon went under cultivation.

Apart from the coastal strip and the valleys, the sandy soils of the district occur under two very different conditions. First, in a great part of this district the subsoil rests directly on the so-called "red beds," weak sandstones containing some clay and variously coloured by iron oxides. Ferruginous nodules and clay usually occur in the subsoil. Second, in other places there is a considerable thickness of loose or feebly coherent sands, no doubt old dune sands. On these the conditions are less favourable. These sands are well seen in the numerous sand pits about Cheltenham and elsewhere.

The original plan of the Brighton Estate, Henry Dendy's purchase, 1841, gives a general description, "Open forest land, timbered with Gum, Oak, Cherry, Honeysuckle, etc. Soil sandy. Country gently undulating." This lies between the North Road and South Road, extending four miles inland. There is very little of the poorer class of country within this area. But the original plan of Moorabbin (H. B. Foot, surveyor, 1852), marks a strip of country east of Sandringham and Black Rock "Heath with occasional patches of Gum scrub." This area and the vicinity of Cheltenham Park, which is partly dune, were the chief excursion localities, and hence our general idea of the district is largely influenced by the poorer land. Parts of the old dunes carry trees and these have become more noticeable, as there was little inducement to clear this land early.

The timbered patch at Highett, as the last of its kind remaining in these parts, seems worth description. It is about half a mile directly south of Highett station, and a little north of the junction of Bay Road and Reserve Road. The land is nearly level and relatively high (120 feet), the valleys on each side being distinct but not deep. An old ditch and the post-holes show the ferruginous nodules which occur over the red beds, and these beds are indicated also on Bay Road on the same ridge, to the south-east, and in recent works to the north-west. Four Eucalypts are

present, Yellow Box, *E. melliodora* (most numerous), Red Gum, *E. rostrata*, Manna Gum, *E. viminalis*, and even a few Swamp Gum, *E. ovata*. The other trees are Lightwood, *Acacia implexa*, Black Wattle, *A. mollissima*; abundant *Bursaria*, and a few *Casuarina stricta* and Cherry Ballart, *Exocarpus cupressiformis*. One Boobialla, *Myoporum insulare* remains in the hedge row. The Hedge Acacia, *A. armata*, is, of course, introduced.

The ground is mostly grassy, but the smaller plants noticed include the smooth Flax Lily, *Dianella laevis*, a Mat rush, *Lomandra filiformis*, Sheep's Burr, *Acaena ovina*, the common Flat Pea, *Platylobium obusangulum*, Creeping Bossea, *Bossiaea prostrata*, two Pimeleas, *P. humilis* and *P. curviflora*, Ground Berry, *Acrotriche serrulata*, Kidney Weed, *Dichondra repens*, Sweet Houndstongue, *Cynoglossum suaveolens*, and a few plants of a Sword sedge, *Lepidosperma sp.*

The woodland extends in a narrow strip beside a house to Bay Road, where the *Cynoglossum* is appreciated as a choice plant in a garden. Eastward at the railway is clearly old dune with different shape and vegetation. In fact most of the hill has been removed for building sand. But beyond this at Point Nepean Road the red beds are again indicated in the telephone trench, and the land is high and fairly level. Foot records a Box as a marked tree at the corner. None remain now, but there is Lightwood in a hedgerow, plenty of *Bursaria* and some Wattles, and both Flax Lilies and the Houndstongue. Yellow Box seems to have been present also some distance north-west of the present timber.

The other examples of Yellow Box in this district occur under very similar conditions, all on the rises between the valleys, most of them with the red beds clearly indicated and practically certainly present in every case. On the Moorabbin ridge are four poor trees near the Moorabbin station, two of them on railway land, about four in the grounds of a house and nursery (beyond some planted trees) on what was originally the same block, and a couple near a house on Point Nepean Road, about half a mile north-west. On the next parallel ridge at Dane's Road a few remain. (I was told the place was once called Box Hill.) One was recently cut down north-east from Highett station, and in the other direction there are several in a small paddock at South Road. From here the higher land spreads out towards the south-west round the head of a valley. A Yellow Box remains near Bluff Road.

Rounding the head of the valley, another ridge runs to the north-west and carries Yellow Box in a paddock near the municipal golf links, and small second growth on vacant land opposite. Even on the next ridge there were a couple of Yellow Box in the grounds of the house (now Haileybury College), east of

Hampton Street. They were possibly planted, but Foot records Box within half a mile on the same ridge, near Hampton High School. All these ridges extend into Brighton, but the land was cleared early.

The railway plans record a Yellow Box at Glenhuntly station. Further north-west there were formerly several in a paddock at the south-east corner of Glen Eira and Bambra Roads. The original plan, again one of Foot's, has box here and extends it northerly a short distance. Near here also, there are still some Red Gums on relatively high land. Another plan has Box at the corner of Wattletree and Burke Roads. The position is fairly level and high (150 feet). There are still two old Red Gums at this corner of Central Park and one to the west. Easterly along Wattletree Road the grounds round a house have Yellow Box, Red Gum and Manna Gum. A post hole seems to indicate red beds, but their occurrence is practically certain otherwise. The same three Eucalypts occur at Hedgley Dene Gardens, a little to the south, and are skilfully worked into the design.

Box is often mentioned on plans from near Oakleigh to South Yarra, but many of these are near the edge of the red beds and may be on the Silurian area. A few Yellow Box remain in Alma Park, Windsor, west of the railway. The land is relatively high and fairly level. There is Silurian rock in St. Kilda Hill, but the deep railway cutting alongside these trees is in the red beds. I knew it well before the slopes were trimmed and soiled, and the Silurian rock only occurs at the north end of the cutting.

An old plan of 1849 of the area from High Street, St. Kilda, to East Prahran records many Box trees as marked trees, but the list is damaged and the numbers of the allotments lost. Plans also record Box near Balaclava Road, at the corners of Hawthorn Road and of Hotham Street, East St. Kilda. Another plan by Foot, 1850, has two marked Box trees on what is now Cochrane Street, north-west of Gardenvale station. This occurrence is not on the ridge, but is south of the narrow strip of swampy land, where the "creek" developed later. Foot only uses the name "Box," but I find Yellow Box at the many places where I have been able to repeat his observation.

It seems not unlikely that the Yellow Box on the flat-topped ridges may be favoured by slow run-off of water rather than elevation, especially in view of the frequent occurrence of Red Gum on high land near them, and the exceptional Swamp Gums at Highett. A slow run-off on these soils does not involve serious swampiness. Red Gums also occur on rising land between the two main branches of the creek west of Bentleigh. The occurrence of the Red Gums outside the valleys means that the Red

Gum is a real constituent of the flora, not merely extending into the valleys. I would here amend some information I gave to Dr. C. S. Sutton, used in his second article (*Victorian Naturalist*, Vol. XXIX, October, 1912). I was in error as to the supplier of certain old Red Gum posts, but omitted to say that they were obtained quite near; about half a mile south-east of Caulfield Town Hall. Also the absence of Red Gums on the main road began at Balcombe's block "near Cheltenham Cemetery," not Brighton, Balcombe's well-known block at Mentone being near enough considering the early date. There is Red Gum still on the main road just north of Balcombe's Road.

Besides the trees at Highett, the red beds carry at other places *Casuarina suberosa* and the Silver Banksia (*B. marginata*). A peppermint occurred near Caulfield Town Hall, but I do not remember it in Moorabbin. The Blackwood (*Acacia melanoxylon*) belongs partly to the valleys, but, rather strangely, on the dune area of Cheltenham both Blackwood and Lightwood run high up the hill.

The wooded parts on the dune sand have quite a different character from those of the red beds, though Manna Gums occur on both. Among the smaller plants it is possible to name some which seem to prefer one type of country, and we may incidentally notice some other red beds localities.

As to *Bursaria*, Dr. Sutton recorded it from the coastal scrub and I had it as "Woodlands, Hampton." Neither of us seems to have noticed it on the heath. It occurs, however, in the wooded dune at Cheltenham Park, but not so abundantly. The Curved Riceflower (*Pimelea curviflora*) was not in Dr. Sutton's first list, but was added from the hill north of Brighton Beach station—typical "red beds." It may have disappeared there, but is abundant on the railway at Elsternwick station, and on the next hill near Ripponlea. An Acacia on the Elsternwick cutting is apparently Lightwood by its flowering season in summer.

The narrow-leaved Bitter Pea (*Daviesia corymbosa*) occurs on the red beds at the west side of the Victoria Golf Links, Cheltenham. It is of limited occurrence in this district. It is natural that plants common in the forest lands of the eastern suburbs should appear here in the better and more timbered areas.

The Sheep's Burr (*Acaena ovina*) occurs on the red beds at many places. The Houndstongue (*Cynoglossum suaveolens*) found also in grassy land elsewhere, is probably a plant of the red beds in this district. It is flowering this autumn as I have never seen it before, not only in the timber at Highett, but on roadsides near and even on the headlands of a market garden. The Smooth Flax Lily (*Dianella laevis*) seems to favour the red beds. *Dianella revoluta* is on both classes of country, sometimes abundant on the poorer sands.

Podolepis acuminata occurred on the red beds at Brighton Beach hill, but I was unable to locate its position on the Victoria Golf Links, though kindly allowed to explore that area. Among the plants of the poorer sands is the Hill Sword Sedge (*Lepidosperma concavum*. It rarely occurs on the red beds at their boundary. On the other hand it flourishes on nearly bare sands on broken ground. On the red beds we often find another *Lepidosperma* on the higher flat land as well as valleys.

In a general way the country direct on the red beds seems to run easily to grass under occupation; the dune sands run easily to bracken, but this point should perhaps not be pressed too rigidly. Certainly many paddocks at Brighton as I knew them first (say 1886) were grass with scattered trees, mainly Manna Gums on the rises and Red Gum in the valleys and, at places Black Wattle, but the treatment they had received would be involved. There are, of course, transitions from one kind of country to the other, and the limiting conditions may differ for each species. A foot of dune sand might affect some; tree roots might penetrate many feet if they could start in the poorer sand. It was noticed that the Mound Ant (*Iridomyrmex detectus*) avoids the lighter and looser dune sand.

The last extensive timbered area was a block of 155 acres at Hampton along the whole length of the south side of what is now Ludstone Street, a mile and a quarter, starting at Hampton Street near the school. The east end, besides the Box tree at Bluff Road already mentioned, had recently both *Casuarinas*, *Bursaria*, the Houndstongue and the same *Lepidosperma* as elsewhere on the red beds. This area was cleared about 1890 and later.

SANDHILL SNAIL IN VICTORIA

Recorded originally from Geelong many years ago, the Sandhill Snail (*Helix pisana*) spread through the Western District and across the border of South Australia. It has long been very abundant in the Mount Gambier district; and indeed, is flourishing in many parts of its Victorian range. A whitish or yellowish-white shell, about 3½ inches in diameter, it has on its larger whorls numerous linear colour bands, more or less incomplete. In Britain this snail is confined to sandhills near the sea; but on the Continent it occurs far inland; and possibly was introduced into England from a Mediterranean country. Its chief food plants in the British Isles are the Sea Holly (*Eryngium maritimum*) and thistles.

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